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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/787,235	02/27/2004	Hiroshi Nishikawa	325772034600	4822
7590 Barry E. Bretschneider Morrison & Foerster LLP Suite 300 1650 Tysons Boulevard McLean, VA 22102				
			EXAMINER ZHU, RICHARD Z	
			ART UNIT 2625	PAPER NUMBER
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/787,235

Applicant(s)

NISHIKAWA ET AL.

Examiner

RICHARD ZHU

Art Unit

2625

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 03 September 2010.
2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1 and 4-11 is/are pending in the application.
4a) Of the above claim(s) _____ is/are withdrawn from consideration.
5) ☐ Claim(s) _____ is/are allowed.
6) ☒ Claim(s) 1 and 4-11 is/are rejected.
7) ☐ Claim(s) _____ is/are objected to.
8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/GS/US)
4) ☐ Interview Summary (PTO-413)
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____
Paper No(s)/Mail Date _____

DETAILED ACTION

Acknowledgement

1. Acknowledgement is made of applicant's amendment made on 09/03/2010. Applicant's submission has been entered and made of record.

Status of the Claims

2. Claims 1 and 4-11 are pending.

Response to Applicant's Arguments

3. After careful consideration of applicant's arguments, previous grounds of rejections are withdrawn. However, in light of a new teaching, new grounds of rejections are entered.

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

5. Claims 1 and 11 are rejected under 35 USC 103(a) as being unpatentable over *Taruki (JP 2000-134409)* in view of *Komiyama (JP 05-083472)*.

Regarding Claims 1 and 11, Taruki discloses an image reading apparatus (**Drawing 1**) and a spacer (**Drawing 1, Conveyance Guide 13**) for use in said image reading apparatus, comprising:

a reading transparent member (**Drawing 1, Contact Glass 12**);

a reading unit that reads through said reading transparent member an image on an original document that is being conveyed over an original document reading position of said reading transparent member (**Drawing 1 and see Paragraph 11, exposing a manuscript to exposure lamp 14 and CCD27 through contact glass 12**); and

a spacer that is mounted on said reading transparent member on a surface thereof opposite the side thereof at which said reading unit is disposed (**Drawing 2, Conveyance Guide 13a on a side opposite to exposure lamp 14 that is mounted on the surface of contact glass 12**) and at a position upstream from the original document reading position relative to an original document conveyance direction (**Drawing 1, the conveyance direction of manuscript indicated by the direction of the arrow suggest that the Conveyance Guide 13 is at a position upstream from the contact glass 12**),

wherein the spacer is configured such that height of a downstream end thereof relative to the original document conveyance direction decreases in a sloping manner toward the downstream direction (**Drawing 2**),

the spacer comprising a topmost edge configured to cause a first portion of the original document to be out of contact with the reading transparent member at a location over the original document reading position (**Drawing 5, Paragraphs 34 and 35**), and the spacer comprising a sloping surface configured such that a trailing edge portion of the original

document passes a position very close to or in contact with the sloping surface of the spacer
(Drawing 1, path of manuscript indicated by arrow 9 comes very close to the sloping surface of conveyance guide 13), and

a distance between the reading transparent member and the first portion of the original document is less than 0.3 mm at the location over the original document reading position **(Paragraph 34, 0.25mm).**

Taruki does not disclose the spacer is structured to allow a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position relative to the original document conveyance direction as the first portion of the original document is conveyed over the original document reading position.

Komiyama discloses a spacer that is structured to comprise a topmost edge to cause a first portion of an original document to be out of contact with a reading transparent member at a location over an original document reading position and a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position relative to the original document conveyance direction as the first portion of the original document is conveyed over the original document reading position **(Drawing 3 and see paragraph 27).**

Komiyama suggests that when a space between a transparent reading member and a manuscript guide is small, a slope configuration in the manner disclosed would be advantageous in preventing a paper jam when rushing the tip of the manuscript into the space **(Paragraph 27).** Therefore, one of ordinary skill in the art at the time of the invention

would've been motivated to modify the spacer of *Taruki* to follow the configuration of *Komiyama*, which would allow a second portion of the manuscript to come into contact with the transparent reading member at a location downstream from the first portion of the manuscript, for the purpose of preventing paper jam when a manuscript is being inserted into a space between the transparent reading member and the manuscript guide that is less than 0.25mm.

6. Claims 4 and 9 are rejected under 35 USC 103(a) as being unpatentable over *Takuya (JP 2001-223832 A)* and *Taruki (JP 2000-134409)*.

Regarding Claim 4, *Takuya* discloses an image reading apparatus, comprising:

a reading transparent member (Fig 1, translucent reading criteria member 2 and see paragraph 11);

a reading unit that reads through said reading transparent member an image on an original document that is being conveyed over an original document reading position of said reading transparent member (Fig 1, reading station P and read means 3, and see paragraph 11 where a manuscript M is being conveyed over reading station P); and

a spacer that is mounted on said reading transparent member on a surface thereof opposite the side thereof at which said reading unit is disposed and at a position upstream from the original document reading position relative to an original document conveyance direction (Fig 1, level difference formation member 4 and capture member 5 are mounted on translucent reading criteria member 2 and opposite the side thereof. Reading Station P is disposed at a position upstream from an original document

reading position relative to an original document conveyance direction and see

Paragraph 15, “manuscript M conveyed in the upstream of the reading station P”),

wherein said spacer comprises a lower surface member that comes into contact with said reading transparent member (**Figs 1-3 and see Paragraph 29, level difference formation member 61 is in contact with glass platen 31**) and an upper surface member that comes into contact with the original document during conveyance of the original document (**Fig 3, Manuscript M**) wherein such members are glued together (**Paragraph 16, "a thing which consists of an adhesion object", a translated Japanese term to describe glue, which has an adhesive nature**) to form a step configuration (**Paragraph 29, level difference member 61 is stuck on glass platen 31 and see paragraph 16-17, capture member 5 is attachable from level difference member 4 and 61 to form a step configuration, Fig 1. It appears that the different embodiments of the reference are made of similar composition and are structurally related. For example, level difference member 61 corresponds to level difference member 4 and glass platen 31 corresponds to reading criteria member 2, see Paragraph 13. There is a great degree of interchange operability between the embodiments; i.e., element 4 = element 61**) where the height of the steps decreases toward a downstream direction (**Fig 1, the height of capture member 5 is less than the height of level difference member 4**), and said upper surface member is made of a material having both a lower friction coefficient and superior wear-resistance than a material of said lower surface member (**Paragraph 29, level difference member composed of materials having low coefficient of friction allowing the conveyance of manuscript M. Paragraph 16, capture member 5 consist of slot material. Material with**

less friction reduces the wear and tear erosion due to constant mechanical contact with another material);

a topmost edge of the upper surface member of the spacer configured to cause a first portion of the original document to be out of contact with the reading transparent member at a location over the original document reading position (**Fig 1, Manuscript M out of contact with translucent member 2**) and a second portion of the original document to come in contact with the reading transparent member at a location downstream from the original document reading position relative to the original document conveyance direction as the first portion of the original document is conveyed over the original document reading position (**Fig 2, manuscript M is in contact with translucent member at the center of the document reading position**) and the lower surface member of the spacer being configured such that a trailing edge portion of the original document passes a position very close to or in contact with a distal end of the lower surface member of the spacer (**Drawing 1**).

Takuya does not disclose a distance between a reading transparent member and a first portion of the original document is less than 0.3 mm at the location over the original document reading position.

Taruki discloses a distance between a reading transparent member and a first portion of the original document is less than 0.3 mm at the location over the original document reading position (**Paragraph 34, 0.25mm**).

The reason for having a space between the reading transparent member and the original document being conveyed is to allow the smooth conveyance of the original to thereby allow accurate reading by image sensor below the transparent reading member.

There, it would've been obvious to one of ordinary skill in the art at the time of the invention to set the amount of space to be at an exemplary distance of 0.25mm, which is less than 0.3mm, in order to ensure the above goal.

Regarding Claim 9, *Takuya* discloses wherein said upper surface member is formed by a film made of high-polymer polyethylene (**Paragraph 29, composition of level difference formation member comprises polyethylene, fluorine resin “fluororesin, resin made of fluorine and carbon”, which is a species of genus polyester family of synthetic fibers**), while said lower surface member is formed by a film made of slot material (**Paragraph 16**).

7. Claims 5-8 and 10 are rejected under 35 USC 103(a) as being unpatentable over *Takuya (JP 2001-223832 A)* and *Taruki (JP 2000-134409)* in view of *Kitani et al (US 5352883 A)*.

Regarding Claim 5, the combination did not specify the thickness of the upper surface member and lower surface member.

Kitani discloses a spacer in an image processing apparatus comprising a lower surface member that comes into contact with a reading transparent member (**Fig 12, Guide Means 7 contacting light transmissive sensor substrate 1, Col 7, Rows 21-28**) and an upper surface member that comes into contact with the original document during conveyance of the original document (**Fig 12, low frictional layer 119**) wherein such members are glued together to form a step configuration where the height of the steps decrease toward a downstream direction (**Fig 12, there is a leap between the decrease toward downstream direction of surface 119 and protection layer 2 on top of substrate 1, therefore it is a step configuration**), and said upper surface member is made of a material having both a

lower friction coefficient and a superior wear resistance than a material of said lower surface member (**Col 12, Rows 61-68**).

Kitani further specified that at least the lower surface member or guide means be at least 0.3mm or less (**Col 14, Rows 48-51**).

Although the reference does not suggest that the upper surface member being .4 mm, however MPEP 2144.05 states that “where the general conditions of a claim are disclosed in the prior art, it is not inventive to discover the optimum or workable ranges by routine experimentation”. See *In re Aller*, 220 F.2d 454, 456, (CCPA 1955).

Therefore it would've been well within the skill of one of ordinary skill in the art at the time of the invention to discover the optimal thickness of upper surface member through routine experimentation to obtain, for example, the dimensional of 0.4mm in thickness for the upper surface member and the specified thickness for lower surface member in accordance to *Kitani*.

Regarding Claim 6, Takuya discloses wherein a downstream end of said lower surface member relative to the original document conveyance direction protrudes from beyond that of said upper surface member in the downstream direction (**Fig 1, the width of capture member 5**).

Similarly, *Kitani* discloses in an alternative embodiment that a downstream end of a lower surface member relative to the original document conveyance direction protrudes from beyond that of said upper surface member in the downstream direction (**Fig 14, protrusion of guide means 7 relative to support member 148**). Although the reference did not specifically explain the composition of member 148, however, given a specified need to

convey paper across a low friction layer, it is reasonable to use the same low friction material of layer 119 to make member 148).

Although the references did not dictate the specific dimensions such as thickness of upper surface member or protrusion of lower surface member beyond the upper surface member by 1mm, however, it is well within the skill of one of ordinary skill in the art at the time of the invention to discover the optimal thickness of upper surface member through routine experimentation to obtain, for example, the dimensional of 0.4mm in thickness for the upper surface member or a protrusion of 1mm for the following reasons:

In order for the requirement of dimensional limitation such as thickness of upper surface member as well as limitations in the subsequent claims to be patentable over the prior art, the prior arts must not recognize these dimensional limitations as result effective variables; that is, there is neither suggestion or teaching within the applied prior arts to suggest that these variables should be optimized and therefore one of ordinary skill in the art would not be motivated to perform routine experimentation involving said limitations, see *In re Antonie*, 559 F.2d 618 (CCPA 1977)¹. This is not the case in the instant application because at least *Kitani* recognizes the thickness of at least guide means 7 to be a variable relevant to the performance of the apparatus (**Col 14, Rows 48-51**). Therefore, one of

¹ See Page 8, "The controlling question is simply whether the differences (namely the value of 0.12 and its property) between the prior art and appellant's invention as a whole are such that appellant's invention as a whole would have been obvious. The answer is no. It is impossible to recognize, from the experiment taught by El-Naggar, that "treatment capacity" is a function of "tank volume" or the tank volume-to-contactor area ratio. Recognition of this functionality is essential to the obviousness of conducting experiments to determine the value of the "tank volume" ratio which will maximize treatment capacity. Such functionality can *only be determined* from data representing either efficiency at varying tank volume, fixed throughput, and fixed contactor area or throughput at varying tank volume, fixed efficiency, and fixed contactor area. Each of these experiments represents treatment capacity with fixed contactor area but varying tank volume. This sort of experiment would not be suggested by the teachings of El-Naggar since he was not trying to maximize or control "treatment capacity." The experiments suggested by El-

ordinary skill in the art at the time of the invention would be motivated to perform routine experimentation to find the most optimal thickness for both the guide means 7 and low frictional layer 119 because the frictional layer is an integral part of the spacer comprising the two components in at least one disclosed embodiment (**Fig 13**). Therefore, in the instant case, the dimensional limitation required by the applicant does not distinguish over the prior art because it does not offer any advantage or unexpected result that would not have been recognized by one of ordinary skill in the art through routine experimentation, see *Gardner v. TEC Systems, Inc.*, 725 F.2d 1338, 220 USPQ 777 (Fed. Cir. 1984), cert. denied, 469 U.S. 830, 225 USPQ 232 (1984)².

Regarding Claim 7, *Takuya* discloses wherein said reading position is placed at a position from the downstream end of said lower surface member toward the downstream direction (**Fig 1, distance between translucent reading criteria member 2 and capture member 5**).

Although the reference does not disclose that said reading position is placed at 3 mm from the downstream, it would've been well within the skill of one of ordinary skill in the art to determine the optimal position through routine experimentation for the rationales set forth above.

Naggar do not reveal the property which applicant has discovered, and the PTO has provided us with no other basis for the obviousness of the necessary experiments".

² See Page 784, "Having considered carefully all of the trial testimony and the numerous demonstrations and exhibits, the Court previously concluded that these requirements were empty formulae that had no relationship to any of the principles of fluid mechanics or phenomena thereof which were demonstrated in the trial. To this Court, they were incantations that may have superficially made the application sound like something unique and inventive but had no real function. So far as this poor observer could conclude, adherence to these dimensional mandates did not produce any discernible result or any synergistic [sic] effect. Nor did departure therefrom cause a failure of the web support. Surely, the patent law does not attach uniqueness to dimensional claims that have no significance in the operation of the claimed invention".

Regarding Claim 8, *Takuya* discloses wherein there is an interval between said reading transparent member and an original document conveyance path at said original document reading position (**Fig 1, the interval between manuscript M and translucent reading criteria member 2**).

Although the reference does not disclose it is .2ram from the downstream, it would've been well within the skill of one of ordinary skill in the art to determine the optimal interval through routine experimentation for the rationales set forth above.

Regarding Claim 10, *Takuya* discloses wherein said upper surface member is formed by a film made of fluorine resin (**Paragraph 29, composition of level difference formation member comprises polyethylene, fluorine resin "fluororesin, resin made of fluorine and carbon", which is a species of genus polyester family of synthetic fibers**), while said lower surface member is formed by a film made of slot material (**Paragraph 16**).

The reference does not disclose the lower surface member or the capture member be made of polyester. *Kitani* discloses a spacer underneath the coated material 119 be made of polyester (**Col 7, Rows 21-27**).

Therefore it would've been obvious to one of ordinary skill in the art at the time of the invention to make the lower surface member or capture member with polyester having the effect of a greater friction that can capture foreign material from the conveyed paper medium.

Conclusion

8. Applicant's amendment necessitated the new grounds of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to examiner Richard Z. Zhu whose telephone number is 571-270-1587 or examiner's supervisor King Y. Poon whose telephone number is 571-272-7440. Examiner Richard Zhu can normally be reached on Monday through Thursday, 0630 - 1700.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197

(toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Richard Z. Zhu/
Assistant Examiner
Art Unit 2625
10/07/2010

/King Y. Poon/

Supervisory Patent Examiner, Art Unit 2625